

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROBERT J. TRIBE and CHRIS PICKLES

Appeal No. 2006-0242
Application No. 09/920,728

ON BRIEF

MAILED

APR 21 2006

PAT. & T.M. OFFICE
BOARD OF PATENT APPEALS
AND INTERFERENCES

Before MCQUADE, CRAWFORD, and TIMM, Administrative Patent Judges.

CRAWFORD, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1, 4, 5, and 7-10, which are all the claims pending in this application. Claims 2, 3, and 6 have been cancelled.

The appellants' invention relates to a syringe pump adapted to receive a syringe having a plunger movable in a barrel. The pump has a force sensor that detects occlusions in the infusion

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line. The pump is operable in response to a detected occlusion to reverse the drive applied to move the plunger along the barrel sufficiently to reduce excess force on the medication until the force created as a result of the occlusion decreases to a predetermined level (specification at 2). A copy of the claims under appeal is set forth in the appendix to the appellants' brief.

THE PRIOR ART

The prior art reference of record relied upon by the examiner in rejecting the appealed claims is:

Moberg 6,362,591 Mar. 26, 2002
(filed Oct. 28 1999)

THE REJECTIONS

Claims 1, 5, 7, 9, and 10 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Moberg.

Claims 4 and 8 stand rejected under 35 U.S.C. § 103 as being unpatentable over Moberg.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejection, we make reference to the answer (mailed January 26, 2005) for the examiner's complete reasoning in support of the rejections, and to the brief (filed April 27, 2004), supplemental brief (filed November 4, 2004), and reply brief (filed March 22, 2005) for the appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' claims and specification, the applied prior art reference, and to the respective positions advanced by the appellants and the examiner. As a consequence of our review, we make the determinations which follow.

We turn first to the examiner's rejection of claims 1, 5, 7, 9, and 10 as being anticipated by Moberg.

We initially note that a prior art reference anticipates the subject of a claim when the reference discloses every feature of the claimed invention, either explicitly or inherently. See Hazani v. Int'l Trade Comm'n, 126 F.3d 1473, 1477, 44 USPQ2d 1358, 1361 (Fed. Cir. 1997) and RCA Corp. v. Applied Digital Data Sys., Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984). However, anticipation does not require that the reference teach what the appellants are claiming, but only that the claims on appeal "read on" something disclosed in the reference. See Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 772, 218 USPQ 781, 789 (Fed. Cir. 1983), cert. denied, 465 U.S. 1026 (1984).

In support of his anticipation rejection, the examiner finds:

Moberg discloses a syringe pump having a drive mechanism 120, an occlusion detector

including a force sensor 7' (see US 4,678,408 incorporated by reference in col. 4, lines 27-30), and the method steps as claimed.

Moberg's syringe pump is operable in response to a detected occlusion to reverse the drive applied to move the plunger along the barrel sufficiently until the force detected by the force sensor falls by a predetermined amount [Answer at 3].

The appellants argue that Moberg does not disclose a force sensor. In appellants' view, Moberg does not disclose a force sensor because its sensor detects an occlusion by monitoring one or more motor parameters, such as voltage, current, running time, rotation or linear displacement (column 5, lines 38-42). Also, in appellants' view, the essence of the Moberg invention is "to avoid the need for high pressure limit switches." Thus, in appellants' view, not only is a force sensor not inherent in Moberg, but Moberg also teaches away from using any force sensor (Reply Brief at 2).

The appellants' argument is unpersuasive. During prosecution, the PTO gives claims their broadest reasonable meaning in light of the specification. In re Crish, 393 F.3d 1253, 1257, 73 USPQ2d 1364, 1367 (Fed. Cir. 2004). Appellants' specification discloses that the force sensor is a structure that, "responds to the force exerted on the plunger head 36 by the retainer and provides an output to the control unit 11" (Specification at 4).

Moberg's occlusion detector measures increased reservoir pressure resulting from an occlusion indirectly by measuring one or more motor parameters, and flagging the electronics to cease further delivering if the motor parameter necessary to drive that load exceeds a predetermined amount (Column 5 at lines 40-45). Since force, or pressure on the plunger, or reservoir is detected, and this detected force or pressure causes a change in the motor parameters which in turn cause the drive of the pump to reverse direction, Moberg's detector is a sensor that detects force or pressure albeit indirectly. We note that claim 1 does not recite that the force sensor senses the force on the plunger directly. As such, the occlusion detector disclosed in Moberg's patent is a force sensor as broadly claimed.

In view of the foregoing, we will sustain the examiner's rejection of claim 1. We will likewise sustain the examiner's rejection of claims 5, 7, 9, and 10 as the appellants have not presented separate arguments regarding the patentability of these claims. In re Nielson, 816 F.2d 1567, 1572, 2 USPQ2d 1525, 1528 (Fed. Cir. 1987).

We turn next to the examiner's rejection of claims 4 and 8 under 35 U.S.C. § 103 as being unpatentable over Moberg.

Claim 4 recites:

A pump according to Claim 1, wherein the pump is arranged to reverse the *drive until force detected by said force sensor is substantially 10% of the force at which an occlusion is detected* [emphasis added].

The examiner recognizes that Moberg fails to specifically disclose the pump being arranged to reverse the drive until force detected by the force sensor is substantially 10% of the force at which an occlusion is detected, and the force applied to drive the plunger is changed to reduce the detected force to substantially 10% of the predetermined value. However, in the examiner's view, the determination of the value of the force detected at which the pump reverses direction may be determined by routine experimentation to determine the optimum result (Answer at 4).

Appellants argue that since Moberg does not disclose any force sensor, and since Moberg teaches eliminating the use of force sensors, a person of skill in the art at the time that the instant invention was conceived could not have considered as obvious the reversing of the drive of the syringe pump until the force detected by the force sensor is substantially 10% of the force at which an occlusion is detected.

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Appellants' argument is not persuasive because Moberg does teach a force sensor that detects reservoir pressure indirectly by detecting motor parameters (Column 5, lines 32-48). Also, Moberg discloses that the occlusion detection system causes the pump to "rewind by some predetermined amount" until there is no excess pressure (Column 6, lines 5-13).

We agree with the examiner that a person of ordinary skill in the art could determine, by routine experimentation, the value of force at which the pump reverses direction which would produce optimum results. We note that, it is the general rule that discovery of an optimum value of a result effective variable is ordinary within the skill of the art. See In re Boesch, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980) and In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

In view of the foregoing, we will sustain the examiner's rejection of claim 4. We will likewise sustain the rejection of claim 8.

The decision of the examiner is affirmed.

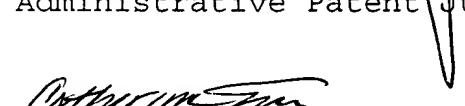
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No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED


John P. McQuade
Administrative Patent Judge


Murriel E. Crawford
Administrative Patent Judge


Catherine Timm
Administrative Patent Judge

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